

USAWC STRATEGY RESEARCH PROJECT

U.S. NAVY TRANSFORMATION: SEA  
BASING AS SEA POWER 21 PROTOTYPE

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## ABSTRACT

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This Strategic Research Project analyzes the relationship between U.S. National Security Strategy, Defense Transformation and Maritime Strategy. Specifically, it focuses on the U.S. Navy's Sea Power 21 strategy and its most transformational pillar, Sea Basing. This Strategic Research Paper analyzes the operational concepts, key issues, and recent fleet experience with Sea Basing. My thesis is that an incremental, evolutionary approach to Sea Basing is appropriate as the U.S. Navy transitions from its role as Cold War Superpower to 21st Century Hegemon.

The majority of the research on this strategic research project is less than 18 months old, with a significant portion less than three months old. A critical view of all sources is required since their purposes are fundamentally based on visions of future requirements as well as proposed plans to meet these future requirements. A strong Navy-Marine Corps bias runs through most sources; vetting of this concept through the joint process (Joint Integrating Concept) is in progress.



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## U.S. NAVY TRANSFORMATION: SEA BASING AS SEA POWER 21 PROTOTYPE

This past year demonstrated the value of naval forces projecting decisive, joint power across the globe... (We) surged combat excellence to Operation Iraqi Freedom and Operation Enduring Freedom, seven aircraft carriers and nine big deck amphibious ships were among the 164 ships to deploy worldwide. The Military Sealift Command sailed and chartered more than 210 ships and moved 94% of the nation's joint and combined capability to the fight. We also deployed three Fleet Hospitals, a Hospital ship, 22 P-3 aircraft and 25 Naval Coastal Warfare Detachments... Our task: continue to accelerate the advantages the U.S. Navy brings this nation.<sup>1</sup>

This quote from Chief of Naval Operations Admiral Vern Clark's Guidance for Naval Leaders in 2004 provides insight into the U.S. Navy's current and future role in U.S. national security policy. In his report, Clark uses a ship's navigation metaphor to relate the Navy's strategic ends, ways and means to support U.S. national security policy. He reports that based on a good navigation fix, he holds the Navy Sea Power 21 strategy on track, and he is ordering the Navy to maintain course and increase speed in order to win the Global War on Terrorism and transform the Navy to meet the 21<sup>st</sup> century.<sup>2</sup> In this strategic research paper I will analyze what has been argued as Sea Power 21's most transformational pillar, Sea Basing. My analysis includes an overview of Sea Basing concept of operations, a discussion of relevant critiques, and examples of recent fleet experience in Sea Basing. Throughout this research paper, I will argue that an incremental, evolutionary approach to Sea Basing is appropriate as the U.S. Navy transitions from its role as a Cold War Superpower to a 21<sup>st</sup> century Hegemon.

### **BACKGROUND/CONTEXT**

Traditional ways of employing naval forces include: the strategic movement of troops; the acquisition of advanced bases as close as possible to the scene of action; the landing of armies on a hostile shore; the blockade; and the struggle for mastery of the local sea.<sup>3</sup> Future land warfare concepts of operations in the post-Cold War era, however, call for light, rapidly deployable, maneuver forces supported by remote fires. This concept rests on having intermediate staging bases in or near the theater of operations to support troops and provide logistics and combat fire support.<sup>4</sup> Recent events in Kosovo, Afghanistan, and Iraq have highlighted that access to such bases; however, is uncertain and comes at a high political cost.<sup>5</sup> Sea Basing is defined as the capacity and/or capability to project rapidly sustainable military power ashore from the sea.<sup>6</sup> Based on this definition, Sea Basing is within the traditional ways of employing naval forces.

Sea Basing reflects current USN/USMC amphibious assault capabilities. The naval service is forward deployed as America's 9-1-1 force. It is sovereign US territory; no host nation access is required. It is inherently mobile, thus it creates tremendous uncertainty for the enemy. It is scalable in size and therefore is quickly and easily tailored to the mission. So what's different about Sea Basing? The most fundamental difference is that future Sea Basing enables operations independent of host nation access. The Sea Basing concept is envisioned to enable forcible entry over strategic distances in 10-14 days as well as enable sustained maneuver without operational pause for logistics buildup ashore. It will serve as both an Air Port of Debarkation (APOD) and a Sea Port of Debarkation (SPOD). While the platforms that make up the Sea Base will look very similar to today's Naval and commercial shipping, the logistics systems envisioned are truly transformational. This logistics system of systems will allow rapid strategic sealift, inter-modal transfers at sea, and selective offload of equipment from the Sea Base directly to the war fighter. Finally, Sea Basing is intended to support joint land power projection capabilities.

The advantages that Sea Basing will offer to the Joint Force Commander include: enhanced operational flexibility; maximum combat power ashore with minimum force protection requirements; support and sustainment of all services; and robust command and control. Of note, the absence of fixed bases ashore significantly reduces force vulnerability to what is currently perceived as the greatest future threats, Ballistic/Cruise missiles and WMD. Key disadvantages of Sea Basing are: Sea Bases will be unable to support a large ground force; Sea Bases are vulnerable to missiles, torpedoes, and mines; Sea Bases will not be perceived by the enemy as a credible deterrent; and Sea Bases are too expensive.<sup>7</sup>

## **CRITICAL ANALYSIS OF SEA BASING**

The concept of Sea Basing has been the subject of much analysis, discussion, and debate. In addition to the strong sponsorship of a united Navy and Marine Corps team, a wide diversity of interests have been represented in recent reports, studies, and public forums as well as prolific articles and commentary in military periodicals and journals. These analysis fall into three main categories: Service Perspectives (Do we need it?); Technical/Industrial Issues (Can we build it?); Financial/Political Issues (Can we afford it?).

## **A MARITIME PERSPECTIVE ON SEA BASING**

While the concept of Sea Basing was developed in support of the Navy's Sea Power 21 and Department of Defense Transformation strategies, Rear Admiral John Harvey, Deputy for Warfare Integration in OPNAV, argues that transformation forces us to make choices.<sup>8</sup> He



states that in the planning and budgeting world, words drive requirements. As the OPNAV staff shepherds the Joint Integrating Concept of Sea Basing, they are telling a coherent story using words such as 'power and persistence,' and 'receive and support.' While RADM Harvey acknowledges that Sea Basing is not new, the current requirement does not resemble the "Murderer's Row at Ulithi" of World War II or the LST supporting swift boats in the Mekong Delta during Vietnam. The key requirement is to move multi-mission, netted forces to the fight within 10 days. He views D-Day to D+5 as the critical timeline and argues that two Carrier Strike Groups on-station at D+4 may be more relevant than six Carrier Strike Groups on-station at D+30. He argues that the risk will be very high during the initial crisis phase and therefore the aircraft carrier will be the heart of the Sea Base.

Harvey has identified three areas of concern on the Sea Basing requirements. The first is geography. When a 10-day transit arc is drawn from potential world hot spots, forward basing options for sea lift are limited to Diego Garcia and Guam, where basing capacity is limited. Second, he feels that there is a trade-off between selective off-load and ship survivability, i.e. state-of-the-art, automated warehouses modeled on commercial logistics systems will be difficult to incorporate into a ship design that will meet minimum naval ship survivability standards. Finally, Harvey argues that the Sea Base the Navy is promoting must be inherently joint. As the Army moves toward speed and agility in the transformational Modular Army, the Navy must give the Army a voice to ensure that their future Units of Action are deployable and sustainable from the Sea Base.

#### **AN EXPEDITIONARY PERSPECTIVE ON SEA BASING**

Lt General James Mattis, Commanding General, Marine Corps Development Command and former Commander, Task Force 58 in Operation Enduring Freedom in Afghanistan and a Division Commander in Operation Iraqi Freedom, argues that historical precedents guided by the current security situation strongly support the concept of Sea Basing.<sup>9</sup> While he acknowledges that wars are fought by people, not machines and that the sea is not very forgiving to either, he stressed the transformation significance of Sea Basing in the World War II Pacific Campaign (enabled by Underway Replenishment technology) and the Falklands Campaign (enabled by Over the Horizon amphibious operations). LtGEN Mattis believes that Sea Basing will best meet current security requirements for speed, persistence, small foot print, assured access, and scalability. He argues that Sea Basing will result in a wider range of options for national security decision makers as well as provide them the ability "to stop the train once it has left the station". He argues the key requirements for Sea Basing will be the

development of ships capable of 30 knot transits to transport non self-deploying aircraft, ship loads and systems that support selective off-load of equipment, and stabilized cranes to enable inter-modal transfers. Additionally, he is concerned that the concept does not fully address medical transport, medical care, and maintenance of equipment and vehicles. Overall, General Mattis sees Sea Basing as the key enabler for the Joint Forcible Entry Program and recommends that we work to include Coalition partners in the development of the concept and technology.

#### **A LAND POWER PERSPECTIVE ON SEA BASING**

Major General Robert Scales, U. S. Army (retired), a former Commandant of the U.S. Army War College and a member of the Defense Science Board's study on Sea Basing argues that the Defense Science Board study had little input from the Army or the Air Force and the Navy and Marine Corps must work to include them.<sup>10</sup> He believes the Sea Basing concept cannot survive by only putting ashore Marine Expeditionary Forces (MEF). His argument is based on lessons learned in recent wars with Iraq. He views the convergence of air power in the first Gulf War as transformational, but not decisive as it allowed the escape of the Iraqi army. In Operation Iraqi Freedom, however, he argues that the unprecedented convergence of an "expeditionary Army and an operational Marine Corps" resulted in the destruction of the Iraqi army. His take-aways are that the current obsession with jointness should not obscure that what happens on land is decisive, that the human side of warfare is important, and that "sometimes quantity has a quality all of its own."<sup>11</sup>

Despite these concerns, Scales believes that the Army's future operational concept of Operational Maneuver by Air is impossible without a Sea Base. He argues that Sea Basing is a future enabler that will allow joint forces to beat a dispersed enemy at his own game. It provides the firepower to keep the enemy from massing, while supporting the ability to maneuver to control people and terrain. He views the Sea Base's most critical function as the ability to close the deployment gap between early operating forces and follow-on forces, thus ensuring the steady flow and smooth transition of forces during all phases of an operation. Therefore, he believes that the Navy will play a key role in converting strategic maneuver to operational maneuver.

MG Scales sees resupply and sustainment as the key Sea Basing problem to be solved. He argues that the logistics system must transform itself since there will be no logistics build up ashore. He suggests adapting the Wal-Mart model that transformed wholesale to retail operations by enabling vendors to deliver just what is needed, just in time, e.g. the Sea Base

would provide direct resupply and sustainment to the platoon level. Scales believes that the critical capability in achieving this logistics transformation is the development of an aircraft that can operate from the sea base and lift up to 20 tons.

#### **A JOINT PERSPECTIVE ON SEA BASING**

Rear Admiral William Sullivan, Vice Director, J5, Joint Staff, argues from a Joint perspective that Sea Basing supports the National Military Strategy and Defense Transformation.<sup>12</sup> He states that in the 20<sup>th</sup> century U.S. forces fought where they were based, but in the 21<sup>st</sup> century U.S. forces will have to move to the fight. This global posture transformation will be an iterative, evolutionary process while flexible, rapidly deployable forces are developed that are not tied down by treaties or dedicated to a specific regional combatant commander. The future global posture that he envisions includes Main Operating Bases with robust support capability, e.g. Yokosuka, Japan; Forward Operating Bases with austere support capabilities, e.g. Bahrain and Diego Garcia; Cooperative Security Locations with very austere support capabilities and no permanent U.S. presences, e.g. Central Asia; and Sea Bases when access is denied or where there are sovereignty concerns, e.g. Operation Unified Assistance in support of tsunami relief in Asia. Sullivan states that the Joint Integrating Concept will incorporate technical studies such as the Defense Science Board report on Sea Basing (August 2003), capabilities based assessments by the USN-Marine Corps and Joint staff (October 2004), and joint exercises such as Exercise Nimble Viking, a war game with regional combatant commander and service staffs (November 2004). RADM Sullivan's key concerns are that the U.S. Air Force is not supporting Sea Basing concepts and war games despite the fact they own the Joint ISR and UAV programs which will be crucial to the effectiveness of Sea Basing. RADM Sullivan also cautions that we should not rely too much on lessons learned from Iraq when making decisions on the Sea Basing as Iraq's geography (narrow point of entry from the sea) may not be the best example.

#### **SEA BASING - DO WE NEED IT?**

Yes, but not at the expense of the other transformational pillars of Sea Shield and Sea Strike. The dramatic transformation of logistics envisioned by the Sea Basing concept will not produce strategic effects that are orders of magnitude greater than its costs. A balanced fleet with the aircraft carrier at the hub of all maritime power will remain the key strategic requirement for the United States. The Navy-Marine Corps Expeditionary Warfare capabilities will remain critical to meeting National Security Strategy and National Military Strategy requirements. However, the undue operational emphasis on joint warfare, i.e. by attempting to make the Sea

Base meet the requirements of all services, may result in a missed opportunity to improve an operational capability that has a long history of success in naval warfare.

#### **TECHNICAL AND INDUSTRIAL ISSUES**

The Defense Science Board report on Sea Basing identified 12 issues that must be addressed to bring Sea Basing from concept to reality. The report identifies three issues as critical: the capability to handle cargo in rough seas; a heavy-lift aircraft (>20 ton) with theater-wide range that can be based at sea; and ships whose design incorporates all the requirements of the Sea Base system of systems.<sup>13</sup> Due to the complexity and difficulty in meeting these technical challenges, the report concluded that an evolutionary approach to the development of joint sea basing is appropriate. Specifically, it recommended that joint forces realistically exercise Sea Basing capabilities to work out problems and to develop expeditionary warfare skills.<sup>14</sup> Further, the report recommended that all services enthusiastically participate in the future development of the Sea Basing concept and that Department of Defense research and development efforts target the 12 issues raised.<sup>15</sup>

A Naval Post-Graduate School multi-discipline research project involving 68 students and faculty recently examined Sea Basing logistics flow issues in more detail. Their study found that planned Sea Based forces in 2015 will be challenged to meet the Department of Defense's Transformational 10/30/30 response timeline.<sup>16</sup> Their data suggests dedicated strategic lift assets are needed to move a brigade-size force to seize the initiative within 10 days, noting "fire-fighters don't take a bus to a fire."<sup>17</sup> Specific capabilities targeted for development include the transporting of non self-deploying aircraft and logistic systems that can reduce multiple, time-consuming, at-sea transfers of cargo and personnel, which are often impossible in heavy seas.<sup>18</sup> The brief recommended further study of strategic lift assets such as high-speed surface ships and lighter-than-air ships to enable rapid force closure as well as a near real-time asset visibility system to avoid building a large stockpile at the objective ashore.<sup>19</sup> They noted the majority of operating air deck spots in the Sea Base will be needed to sustain the troops at the objective, leaving few spots for non-logistical missions. Additionally they concluded the MV-22 Osprey aircraft was best suited for troop transport while the CH-53 heavy-lift helicopter was much more capable of resupply.<sup>20</sup>

At a recent symposium on Sea Basing, a panel of four senior Navy Admirals discussed the key issues required to engineer the Sea Basing vision. Discussion centered around two main areas: risk mitigation in shipbuilding and the strong tie between Sea Basing and Sea Shield concepts. Vice Admiral Phillip Balisle, Commander Naval Sea Systems Command,

argues that risk mitigation in shipbuilding is essential due to the cost impact of unexpected changes in program requirements and schedules as well as the need to balance technological obsolescence with Initial Operating Capability (IOC).<sup>21</sup> Additionally, he argues that a spiral development strategy is required to bring the Sea Basing concept into the fleet. This strategy includes the testing of Engineering Design Modules (EDM), open engineering architectures that allow systems to develop technology faster, and special relationships with industry that reduce overhead costs. Rear Admirals William Landay and Charles Bush, of the Program Executive Offices for Littoral Warfare and Integrated Warfare Systems, respectively, presented similar arguments in their strategies to develop the key systems required to protect the Sea Base and provide operational fires to forces ashore.<sup>22</sup> While in the past, programs would respond to a problem, transformation demands that programs get ahead of the problem through adaptive technologies. The Admirals are concerned, however, that the existing technical oversight process will hinder transformation due to its lack of focus on warfighter requirements. Consequently, the Navy may lose programs crucial to the success of Sea Based operations unless it moves quickly.

### **SEA BASING – CAN WE BUILD IT?**

Maybe. The 12 critical issues identified by the Defense Science Board Task Force may be “a bridge too far,” even if national leadership provides relief regarding the requirement to seize the initiative in 10 days. Sea Basing’s purpose is to help subdue the will of the enemy, not the will of nature. As was learned in World War II during Operation Market Garden, operational brilliance and technological wizardry may allow military forces to asymmetrically exploit the laws of physics but it still results in spectacular failure due to the laws of warfare, i.e. the enemy has “a vote.” The real question is, then, can a Sea Base be built without an Achilles heel? The logistics chain from CONUS to the objective and the factory to the foxhole that Sea Basing in 2015 promises has too many critical vulnerabilities. The Naval Post-Graduate School team got it right: “fire-fighters don’t drive a bus to the fire;” fire-fighters drive fire trucks equipped with fire-fighting equipment that gives them a better than even chance to put the fire out.

### **FINANCIAL AND POLITICAL ISSUES**

The high cost item in developing Sea Basing is the Navy plan to modernize its amphibious and maritime pre-positioning ships over the next 30 years. A study by the Congressional Budget Office (CBO) indicates that these programs will require an average of \$2.4 billion a year over this 30 year period, which is more than twice what the Navy has spent on these types of ships since 1980.<sup>23</sup> The study also notes that other Navy modernization plans in support of Sea

Strike, Sea Shield, and Forcenet concepts have been forwarded to Congress. When combined these plans will require more money than the Navy currently budgets for new ship construction.<sup>24</sup> At the request of the Subcommittee on Sea power of the Senate Committee on Armed Services, the Congressional Budget Office was tasked to look for lower cost alternatives. Their report suggests four different courses of action which result in smaller, less capable forces than Sea Power 21's proposed 375 ship Navy but still provide the capabilities desired by the Navy and Marines at an acceptable cost.

The report contains two alternatives which recommend maintaining past spending levels by choosing between: buying fewer ships with more Sea Basing capability or buying more ships with less Sea Basing capability.<sup>25</sup> The former pays for Sea Basing by cutting force levels for Expeditionary Strike Groups (ESG) from 12 to 6 and for Maritime Pre-positioning Squadrons (MPS) from 3 to 2. The latter pays to replace the amphibious and pre-positioning fleets at near current levels (9 ESG and 3 smaller MPS) but without the critical operational and logistic capabilities required to support Sea Basing's strategic-to-operational maneuver.

Two other alternatives in the report recommend increasing past spending levels by a more modest amount (about 33% vice over 100%).<sup>26</sup> The first would buy two squadrons of MPS ships that are fully capable of Sea Basing and meet Navy standards of ship survivability. To pay for this capability, this alternative proposes cutting Expeditionary Strike Groups from 12 to 8. The final options de-emphasize Sea Basing capabilities while maintaining numbers near current levels, i.e. 10 ESG and 3 MPS.

The Navy's Sea Power 21 transformation plan and the programs that support the Sea Basing concept have caused great uncertainty and ambiguity in the naval shipbuilding industry.<sup>27</sup> A recent Congressional Research Service report on Navy-Marine Corps Amphibious and Maritime Pre-positioning Ship Programs suggests five main areas are ripe for congressional oversight: clarity of the Sea Basing concept; affordability and cost-effectiveness of Sea Basing; coordination with other services on Sea Basing; applicability of the Sea Swap concept to Expeditionary Strike Groups; and the impact of these programs on the shipbuilding industrial base.<sup>28</sup>

#### **SEA BASING – CAN WE PAY FOR IT?**

Given the lack of strategic consensus, the price tag for Sea Basing is currently out of the Navy's reach. The shipbuilding alternatives presented by the CBO are a reasonable compromise; however, it is disconcerting that Congressional budget analysts have a greater role in determining the future Navy than those who have spent years living, working, and fighting

at sea. The Navy has to do more than present Congress with a smooth sales pitch using all the right Department of Defense transformation buzz-words. Military future force planners need to work as a team with the scientific, technical, political and industrial communities, utilizing a pragmatic approach to allow incremental, evolutionary development rather than a dogmatic approach to rapid, revolutionary transformation.

## **INTERIM MEASURES**

The Defense Science Board study concluded that Sea Basing is a critical future joint capability.<sup>29</sup> Due to its technical complexity, the study recommends a spiral development pattern, i.e. get started now with what's available and conduct realistic testing and evaluation.<sup>30</sup> At a recent Sea Basing symposium discussion of possible interim measures centered on two areas: working closely with commercial industry to develop and deliver transformational capabilities within a year or less, and fleet experimentation in organization and doctrine changes with the emerging Expeditionary Strike Group concept.

Vice Admiral David Brewer, Commander, Military Sealift Command (MSC), suggested that interim maritime solutions might include pre-positioned platforms and high-speed connector vessels.<sup>31</sup> He stated that MSC is working with commercial industry to deliver within the next year key shipboard logistics capabilities to current Maritime Pre-positioning Ships including: elevators, automated warehousing systems, selective discharge systems, and stabilized cranes. He cited the recent example of the USS KITTY HAWK employment as an afloat staging base for Special Operations Forces during Operation Enduring Freedom as an emergent requirement that has already been "bridged" by commercial industry. In this case, Military Sealift Command and commercial industry planned and executed shipboard modifications to the Merchant Vessel STOCKHAM in less than six months that enables Special Operations Forces to utilize this pre-positioning ship as an afloat staging base. Brewer stated that MV STOCKHAM is currently deployed in the Western Pacific and participated recently in conducting Humanitarian Assistance operations in the Philippines in December 2004.

Brewer also believes that proven Military Sealift Command innovations may be applicable to the Sea Basing spiral development. First, he suggests that manning costs may be reduced significantly by placing vessels in a reduced operating status. For example, the command ship CORONADO is maintained by 22 civilian mariners while in reduced operating status; when activated, 142 additional civilian mariners and Navy crew fly-in and embark the ship. He believes that commercial vessels outfitted with modules designed for command and control, berthing, and medical facilities can alleviate Sea Basing short-falls in the interim. He

additionally suggests the Navy try future concepts on commercial hulls before it builds special purpose ships. Brewer also stated that the recent performance of civil service and government contract mariners in combat has been very successful. He feels that force protection risks may be mitigated by embarking trained security teams and providing military escort in high threat areas.

Rear Admirals Robert Conway and Michael LeFever, the former and current Commanders, Expeditionary Strike Group One, argue that the Expeditionary Strike Group should be the core building block of the Sea Base.<sup>32</sup> Through innovative changes in training and doctrine they suggest that the Expeditionary Strike Group concept bridges the operational and tactical levels of warfare, crosses the seam between the Joint Force Land Component Commander and the Joint Force Maritime Component Commander, and brings a set of unique capabilities across the whole spectrum of conflict. They argue that the blue water to littoral transformation is not happening fast enough to support the current Joint Forcible Entry requirements of the regional combatant commanders. Consequently, interim measures in developing Sea Basing should include focusing on changes in doctrine and training.

#### **JOINT FORCES COMMAND AND SECOND FLEET SEA POWER 21 INITIATIVES**

VADM Mark Fitzgerald, Commander U.S Second Fleet, provided insight into Sea Power 21's role in current operations.<sup>33</sup> He argues there have been three revolutions in warfare in the last 10-15 years: precision, information, and distributed ops; and that while the precision and information revolutions are more mature, the trend toward distributed ops is still emerging. Fitzgerald reported that Second Fleet forces are currently developing these concepts with emphasis on assured access and effects based ops. He identified the following critical requirement – "to get fires there right now in order to support small groups on the ground."<sup>34</sup> The future warfare attributes that Fitzgerald considers most important are: speed in the decision loop; strategic surge capability; agility; joint and combined operations; kinetic and information measures; and common operational and tactical pictures. Fitzgerald views current transformation efforts in Second Fleet as centered on mature technologies and operational concepts such as precision weapons, integrated forces and a fleet response plan that enables the fleet to surge when needed. Of note, Fitzgerald did not single out Sea Basing as a key to transformation, which suggests that the operational concept and technology are not yet mature enough for fleet demonstrations and exercises.



## **PACIFIC COMMAND AND SEVENTH FLEET SEA BASING EXPERIENCE**

Fleet experience in the Western Pacific provides a different picture. Recent operations in support of the Global War on Terrorism (GWOT) including regional conflicts, low intensity conflicts, and military operations other than war demonstrate that low risk alternatives exist today and suggest that simpler, cheaper ways and means may provide an adequate solution to the problem of how to transform the Navy while winning the GWOT.

## **REGIONAL CONFLICT: COMBAT OPERATIONS IN AFGHANISTAN**

Access to forward operating bases in Central Asia was the critical obstacle that Coalition forces needed to overcome to remove the Taliban regime from power and to deny Al-Qaeda sanctuary in Afghanistan. U.S. diplomatic efforts were successful in negotiating agreements with Pakistan and other Muslim states by being sensitive to domestic political concerns and utilizing expeditionary forces with a small footprint ashore. Naval forces adapted to these requirements by transporting two Marine Expeditionary Units (MEU) to the theater, providing operational fire support with carrier based aircraft, and sustaining its operational maneuver from international waters. Naval forces would close the Pakistan coast at night and conduct operations, and during the day the forces would move out over the horizon to remain out-of-sight of the local population to maintain a low profile.<sup>35</sup> While the Navy and Marine Corps are manned, trained and equipped for expeditionary operations, the extreme distances from international waters in the Indian Ocean to the operational objectives in Afghanistan were unprecedented in U.S. military history.

The employment of Special Operations Forces helicopters, however, presented an operational dilemma. Without a forward operating base ashore, the Joint Force Commander needed an afloat staging base. This was not a mission the Navy was manned, trained, and equipped to accomplish. The Navy met these emergent requirements through extraordinary ad hoc measures. The aircraft carrier KITTY HAWK was deployed from its homeport in Yokosuka, Japan. KITTY HAWK has a large flight deck and extensive aviation facilities, excellent command and control and intelligence capabilities, and a large manpower pool. KITTY HAWK was able to support and sustain a large Special Operations Force for several months on short notice. While effective in meeting mission requirements, the use of an aircraft carrier as a Sea Base was a very expensive option and required the additional deployment of a Carrier Strike Group from the continental United States to the region in order to support requirements for the defense of Japan, Korea and Taiwan.

## **LOW INTENSITY CONFLICT: COUNTER-INSURGENCY OPERATIONS IN THE PHILIPPINES**

As part of the Global War on Terrorism, the Philippine government requested U.S. assistance in training Philippine military forces for counter-insurgency operations in the southern Philippines. The remote location of these islands from Philippine military bases presented many challenges to mounting a successful counter-insurgency operation. Specifically, the Philippine military did not have the expeditionary command and control, intelligence, medical and aviation capabilities required to support and sustain counter-insurgency operations in this remote region. Due to domestic political constraints, however, the Philippine government required a low U.S. profile in any proposed operation. Contingency plans were developed for forward deployed expeditionary forces based in Japan to provide these critical counter-insurgency capabilities from a mobile Sea Base located over-the-horizon. Ultimately, domestic political issues in the Philippines precluded execution of this sea based option.

On one occasion, though, an emergent requirement to support Joint Special Operations Force helicopters and rigid-hull inflatable boats operating in international waters in the vicinity of the southern Philippines was met by deploying the amphibious transport dock ship, USS JUNEAU from its homeport in Sasebo, Japan. JUNEAU is an aviation capable ship, has adequate command and control and intelligence capabilities, and has a fairly large crew. JUNEAU was able to support and sustain a small Special Operations Force for several months on very short notice. While effective in meeting mission requirements, this deployment resulted in the disruption of Seventh Fleet operations and maintenance schedules.

## **MILITARY OPERATIONS OTHER THAN WAR: HUMANITARIAN ASSISTANCE IN INDONESIA**

The tsunami that struck the Indian Ocean littoral regions in December 2004 was unparalleled in modern times for both its destructive power and its geographic scale. While continental nations such as Thailand and India were able to provide disaster relief and humanitarian aid via land lines of communications, island nations such as Indonesia, Sri Lanka, and the Maldives were not so fortunate. Millions of people living in littoral regions were cut-off from sources of assistance and were in desperate need of potable water, food, and medical supplies. At the request of affected nations, U.S. and coalition naval forces forward deployed in the Pacific and Indian Oceans deployed to isolated littoral areas of Northern Sumatra, Eastern Sri Lanka, and the Maldives. While domestic politics put few constraints on forces conducting humanitarian operations, transportation difficulties and conditions ashore prohibited the establishment of forward operating bases. The U.S. Navy's rapid deployment to these remote

regions was truly remarkable. Within five days a Carrier Strike Group (CSG) was providing water, food, and medical care utilizing embarked Navy light helicopters; within ten days an Expeditionary Strike Group (ESG) and elements of two Maritime Pre-positioning Squadrons were providing water, food, and medical care utilizing embarked Marine Corps medium and heavy lift helicopters and Navy landing craft.<sup>36</sup> Within two weeks of the disaster there were almost 13,000 afloat Navy and Marine personnel contributing to relief efforts.<sup>37</sup> Flexible and creative deployments of additional platforms and personnel resulted in successful mission accomplishment and transition from Sea Based, military relief operations to land based, interagency and non-government organization reconstruction operations within 30 days. Notable examples included the redeployment of the amphibious assault ship ESSEX from the Persian Gulf to Indonesia, rendezvousing with four airborne mine countermeasures helicopters in Bahrain; the redeployment of the amphibious dock landing ship FORT MCHENRY from the Philippines to Indonesia, rendezvousing with elements of a naval construction battalion in Okinawa, and the activation from a reduced operating status and deployment of the hospital ship MERCY from San Diego to Indonesia, with stops in Hawaii and Singapore to embark medical personnel and relief supplies.

#### **SEA BASING – ARE WE GOING IN THE RIGHT DIRECTION?**

The fundamental challenges of meeting emergent National Security Strategy and National Military Strategy requirements are best solved using a bottom-up approach. The best answer is found on deployment with the fleet rather than in a beltway computer model. The practical experience of the Seventh Fleet in fighting the GWOT and of the Second Fleet in experimenting with future warfare ways and means should drive the concept, not the other way around.

From a programmatic perspective, Admiral Brewer's approach at the Military Sealift Command has the potential to generate exceptional results but we should not apply his model universally. The strength of the model is that it combines leadership momentum with proven means. The Sea Basing concept needs a team of talented fleet operators, technical experts, and experienced program managers similar to the team that developed the AEGIS weapons system. The AEGIS program was based on a capability: the need to defeat a massive Soviet maritime air force attack using cruise missiles; thus the people, ships, and training/doctrine were integrated from the start. The result achieved not only "defeated" the cruise missile threat, but also formed the building blocks for countering the next threat, theater ballistic missiles. The first step in building such a program for the Sea Basing concept is to gain consensus on the mission.

## CONCLUSIONS

In summary, this strategic research paper has presented differing perspectives on what has been argued as Sea Power 21's most transformational pillar, Sea Basing. From a naval perspective, Sea Basing is a capability inherent in the Navy's vision of future joint warfare; however, transformation requires tough choices and the current operating concept requires greater Army and Air Force input. From an expeditionary perspective, Sea Basing is a fundamental requirement to transform the Marine Corps's vision of future joint warfare and only minor refinements are needed to the current operating concept. From a land power perspective, Sea Basing is an important capability in future joint warfare but the current operating concept has major logistics challenges that must first be overcome if it is to support Army and Air Force units. From a joint perspective, Sea Basing is an important component of the revised global force posture for future joint warfare, and therefore, the joint staff is moving forward in their development of the Sea Basing Joint Integrating Concept. The perspective from the scientific community is that Sea Basing is technically feasible with focused research and development but significant achievements in operational capability are unlikely by 2015. As a result of these differing perspectives, Congressional budget and maritime industrial planners have expressed concern over the disparity between the Navy's Sea Basing vision, shipbuilding plans, and budget inputs.

Throughout this research paper, it has been argued that an incremental, evolutionary approach to Sea Basing is appropriate as the U.S. Navy transitions from its role as a Cold War Superpower to a 21<sup>st</sup> century Hegemon. Critiques from military leaders as well as historical perspectives all validate a Sea Basing requirement. Proposed programs based on Sea Power 21's Sea Basing vision are a risky investment: "a bridge too far" in terms of time, technology, joint interoperability and money. Recent experiences in Sea Basing demonstrate that low risk alternatives exist today and suggest that simpler, cheaper ways and means may provide an adequate solution to the problem of how to transform the U.S. Navy while winning the GWOT. Experience gained through fleet exercises, theater security cooperation, and future ad hoc operations are required; a critical eye should be maintained for future windows of opportunity where technology, resources, and operational doctrine converge to enable a truly, revolutionary transformation.

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## ENDNOTES

<sup>1</sup> ADM Vern Clark, "CNO Guidance for 2004"; available at <http://www.chinfo.navy.mil/navpalib/cno.clark-guidance2004.html>; accessed 9 September 2004.

<sup>2</sup> Ibid.

<sup>3</sup> Frank Uhlig Jr, *How Navies Fight* (Annapolis: U.S. Naval Institute Press, 1994), 399.

<sup>4</sup> Office of the Under Secretary of Defense For Acquisition, Technology, and Logistics, *Defense Science Board Task Force on Sea Basing*. (Washington D.C. Office of the Under Secretary of Defense, August 2003), iii.

<sup>5</sup> Ibid.

<sup>6</sup> Ibid, 12. The USMC/USN concept of Enhanced Networked Seabasing offers a more detailed definition: "The integrated capabilities resident in a family of systems and assets afloat that maximizes the projection of all dimensional naval power both at sea and ashore. It is a quantum leap forward in naval power projection capabilities through phased at-sea arrival and assembly, selective offload, and reconstitution at sea using a netted dispersed force, enabled by FORCEnet, which facilitates joint operations across the range of military operations." Edward Hanlon, Jr, LtGen, USMC and R.A. Route, RADM, USN, Enhanced Networked Seabasing, Marine Corps Combat Development Command, Quantico, VA and Navy Warfare Development Command, Newport, RI, 2003.

<sup>7</sup> Congressional Budget Office, *The Future of the Navy's Amphibious and Maritime Prepositioning Forces*. (Washington D.C.: Congressional Budget Office, November 2004).

<sup>8</sup> John, Harvey, RADM, USN, "Navy Requirements for Seabasing", lecture, Arlington, VA: Surface Navy Association Annual Symposium, 12 January 2005.

<sup>9</sup> James, Mattis, LtGen, USMC, "US Marine Corps View of Seabasing", lecture, Arlington, VA: Surface Navy Association Annual Symposium, 12 January 2005.

<sup>10</sup> Robert, Scales, MG, USA (Ret), "Army View of Seabasing", lecture, Arlington, VA: Surface Navy Association Annual Symposium, 12 January 2005.

<sup>11</sup> Ibid.

<sup>12</sup> William D. Sullivan, RADM, USN, "Sea Shield and Sea Basing – View from the Joint Staff", lecture, Arlington, VA: Surface Navy Association Annual Symposium, 13 January 2005.

<sup>13</sup> Defense Science Board, x, 91-93.

<sup>14</sup> Ibid, 95.

<sup>15</sup> Ibid, 97.

<sup>16</sup> John Lemmon, CDR, USN, "Seabasing and Joint Expeditionary Logistics Project Information Brief," briefing slides, Monterrey, CA: US Naval Post-Graduate School, 2 December 2004, Executive Summary, 3.

<sup>17</sup> Ibid, slide 4.

<sup>18</sup> Ibid, Executive Summary, 4-5.

<sup>19</sup> Ibid, 7.

<sup>20</sup> Ibid, 8.

<sup>21</sup> Phillip Balisle, VADM, USN, "Platform Issues – Sea Shield and Sea Basing" panel discussion, Arlington, VA: Surface Navy Association Annual Symposium, 13 January 2005.

<sup>22</sup> William Landay, III, RDML, USN, "Platform Issues – Sea Shield and Sea Basing" panel discussion, Arlington, VA: Surface Navy Association Annual Symposium, 13 January 2005.

<sup>23</sup> CBO study, preface.

<sup>24</sup> Ibid.

<sup>25</sup> Ibid, 1-8.

<sup>26</sup> Ibid, 9-15.

<sup>27</sup> Ronald O'Rourke, Congressional Research Service Report for Congress. Navy-Marine Corps Amphibious and Maritime Prepositioning Ship Programs: Background and Oversight Issues for Congress. (Washington D.C.: Congressional Research Service, 15 November 2004), summary.

<sup>28</sup> Ibid, 13-23.

<sup>29</sup> Defense Science Board, cover letter.

<sup>30</sup> Ibid.

<sup>31</sup> David Brewer, III, VADM, USN, "Components of Sea Basing: What's available in the Interim?" panel discussion, Arlington, VA: Surface Navy Association Annual Symposium, 12 January 2005.

<sup>32</sup> Robert Conway, Jr, RADM, USN, "Components of Sea Basing: What's available in the Interim?" panel discussion, Arlington, VA: Surface Navy Association Annual Symposium, 12 January 2005.

<sup>33</sup> Mark Fitzgerald, VADM, USN, "Sea Power 21: Current Operations," lecture, Arlington, VA: Surface Navy Association Annual Symposium, 13 January 2005.

<sup>34</sup> Ibid.

<sup>35</sup> Mattis, SNA lecture.

<sup>36</sup> Combined Support Force 536, "Staff Update", briefing slides, Utapao, Thailand, 14 January 2005.

<sup>37</sup> Ibid.





## BIBLIOGRAPHY

- Allen, Patrick, CAPT, USN, "Components of Sea Basing: What's available in the Interim?" panel discussion, Arlington, VA: Surface Navy Association Annual Symposium, 12 January 2005.
- AMI International, "Sea Basing Program: Sea Basing Perspective Within the Triad of Sea Power 21," available from <http://www.amiinter.com/seabasing.html>. Internet. Accessed 28 January 2005.
- Balisle, Philip, VADM, USN, "Platform Issues – Sea Shield and Sea Basing" panel discussion, Arlington, VA: Surface Navy Association Annual Symposium, 13 January 2005.
- Barnard, Richard C., "Sea Basing: Concept Promises a Revolution in Power Projection," *Sea Power*, June 2004: 10-12.
- Barnard, Richard C., "Success of Sea Basing: Concept Hinges on Effective Logistics Management Systems," *Sea Power*, June 2004: 20-21.
- Bowling, John H., RDML, USN, "Meeting Future Challenges to Sea Basing and Sea Shield" panel discussion, Arlington, VA: Surface Navy Association Annual Symposium, 13 January 2005.
- Brewer, David, III, VADM, USN, "Components of Sea Basing: What's available in the Interim?" panel discussion, Arlington, VA: Surface Navy Association Annual Symposium, 12 January 2005.
- Bucci, Mike, VADM, USN and Mullen, Mike, VADM, USN, "Sea Shield: Projecting Global Defense Assurance," *Proceedings*, November 2002: 56-59.
- Bush, Charles, RDML, USN, "Platform Issues – Sea Shield and Sea Basing" panel discussion, Arlington, VA: Surface Navy Association Annual Symposium, 13 January 2005.
- Bush, George W., *The National Security Strategy of the United States of America*. Washington D.C.: The White House, 17 September 2002.
- Byron, John, CAPT, USN, "Commentary: The Nation Needs a Different Navy," *Proceedings*, June 2004: 2.
- Cahlink, George, "Navy Eyes New Kinds of 'Connectors' Between Sea Bases, Forces Ashore," *Sea Power*, June 2004: 18-19.
- Cebrowski, A.K., *Military Transformation: A Strategic Approach*. Washington D.C.: Office of the Secretary of Defense, Fall 2003.
- Clark, Vern, ADM, USN, "CNO Guidance for 2005: Winning the Fight ... And Bridging to the Future." 5 January 2005; available from <http://www.navy.mil/navpalib/cno/clark-guidance2005.html>; Internet; accessed 5 January 2005.

- Clark, Vern, ADM, USN, "CNO Guidance for 2004: Accelerating our Advantages." 2004; available from <<http://www.navy.mil/navpalib/cno/clark-guidance2004.html>>; Internet; accessed 9 September 2004.
- Clark, Vern, ADM, USN, "Edited remarks, Surface Navy Association." 11 January 2005; available from <<http://www.chinfo.navy.mil/navpalib/cno/speeches/clark050111.txt.html>>; Internet, accessed 11 January 2005.
- Clark, Vern, ADM, USN, "Sea Power 21: Projecting Decisive and Joint Capabilities," *Proceedings*, October, 2002: 32-41.
- Congressional Budget Office, *The Future of the Navy's Amphibious and Maritime Prepositioning Forces*. Washington D.C.: Congressional Budget Office, November 2004.
- Conway, Robert, Jr, RADM, USN, "Components of Sea Basing: What's available in the Interim?" panel discussion, Arlington, VA: Surface Navy Association Annual Symposium, 12 January 2005.
- Cook, Greg, COL, USAF, "Joint Seabasing and the JCIDS Process," briefing slides with scripted commentary, Washington, D.C.: Joint Staff, 20 October 2004.
- Cook, Henry B., Major, USANG, "Sea Basing and the Maritime Pre-Positioning Force (Future)," *Military Review*, July-August 2004: 54-58.
- Corbett, Art, COL, USMC and Goulding, Vince, COL, USMC(ret), "Sea Basing: What's New?" *Proceedings*, November 2002: 34-39.
- Dombrowski, Peter J., and Ross, Andrew L., "Transforming the Navy: Punching a Feather Bed?" *Naval War College Review*, 56 (Summer 2003): 107-131.
- Fitzgerald, Mark, VADM, USN, "Sea Power 21: Current Operations," lecture, Arlington, VA: Surface Navy Association Annual Symposium, 13 January 2005.
- Hamilton, Charles, RADM, USN, "Platform Issues – Sea Shield and Sea Basing" panel discussion, Arlington, VA: Surface Navy Association Annual Symposium, 13 January 2005.
- Hanlon, Edward, Jr, LtGEN, USMC and Route, R.A., RADM, USN, *Enhanced Network Seabasing*, Marine Corps Development Command, Quantico, VA, and Navy Warfare Development Command, Newport RI, 2003.
- Harms, Alfred G., VADM, USN and Hoewing, Gerald L., VADM, USN, and Totushek, John B., VADM, USN, "Sea Warrior: Maximizing Human Capital," *Proceedings*, June 2003: 48-52.
- Harvey, John, C., RADM, USN, "Navy Requirements for Seabasing", lecture, Arlington, VA: Surface Navy Association Annual Symposium, 12 January 2005.
- Hendrix, Henry J., LCDR, USN, "Exploit Sea Basing," *Proceedings*, August 2003:63.

Hicks, Alan, RDML, USN, "Meeting Future Challenges to Sea Basing and Sea Shield" panel discussion, Arlington, VA: Surface Navy Association Annual Symposium, 13 January 2005.

Jacobs, Keith, "Is the U.S. Navy Off Course," *Naval Forces*, Fall 2004: 45-51.

Joint Staff, Seabasing: Joint Integrating Concept (draft version .65), Washington D.C.: Joint Staff, 28 October 2004.

Keeter, Hunter C., "Navy, Marine Corps Sea Base Effort Inspires Joint-Service Cooperation," *Sea Power*, June 2004: 14-16.

Kelly, John, RADM, USN, "Meeting Future Challenges to Sea Basing and Sea Shield" panel discussion, Arlington, VA: Surface Navy Association Annual Symposium, 13 January 2005.

Kelly, John, RADM, USN, "Sea Basing Presents 'Infinite Number of Problems' for the Enemy: An Interview with RADM Kelly." Interview by Hunter C. Keeter. *Sea Power*, June 2004: 22-24.

Klein, John J., LCDR, USN and Morales, Rich, Major, USA, "Sea Basing Isn't Just About the Sea," *Proceedings*, January 2004: 32-35.

Labs, Eric J., "Building the Future Fleet: Show us the Analysis!" *Naval War College Review*, 57 (Summer/Autumn 2004): 138-145.

Landay, William, III, RDML, USN, "Platform Issues – Sea Shield and Sea Basing" panel discussion, Arlington, VA: Surface Navy Association Annual Symposium, 13 January 2005.

Lemmon, John, CDR, USN, "Seabasing and Joint Expeditionary Logistics Project Information Brief," briefing slides, Monterey, CA: US Naval Post-Graduate School, 2 December 2004.

Locklear, Samuel, III, RADM, USN, "World Class Modeling and Simulation: Modeling the Sea Base", lecture, Arlington, VA: Surface Navy Association Annual Symposium, 12 January 2005.

Marx, Paul H., "Barbarians at the Gate," *Proceedings*, May 2004: 32-36.

Mattis, James, LtGen, USMC, "US Marine Corps View of Seabasing", lecture, Arlington, VA: Surface Navy Association Annual Symposium, 12 January 2005.

Mayo, Richard W., VADM, USN and Nathman, John, VADM, USN, "ForceNet: Turning Information into Power," *Proceedings*, February 2003: 42-46.

McKearney, Terry, CDR, USN(ret), "Sea Power 21: Comment and Discussion," *Proceedings*, November 2004: 10-14.

Moore, Charles W., VADM, USN and Hanlon, Edward, Jr., LtGen, USMC, "Sea Basing: Operational Independence for a New Century," *Proceedings*, January 2003: 80-85.

Mullen, Mike, VADM, USN, "Global Concepts of Operations," *Proceedings*, April 2003: 66-69.

- Myers, Richard B., GEN, USAF, *National Military Strategy of the United States of America 2004: A Strategy for Today; A Vision for Tomorrow*. Washington D.C.: The Pentagon, 2004.
- Natter, Robert J., ADM, USN, "Sea Trial: Enabler for a Transformed Fleet," *Proceedings*, November 2003: 62-66.
- Office of the Under Secretary of Defense For Acquisition, Technology, and Logistics, *Defense Science Board Task Force on Sea Basing*. Washington D.C. Office of the Under Secretary of Defense, August 2003.
- O'Rourke, Ronald, Congressional Research Service Report for Congress. Navy-Marine Corps Amphibious and Maritime Prepositioning Ship Programs: Background and Oversight Issues for Congress. Washington D.C.: Congressional Research Service, 15 November 2004.
- O'Rourke, Ronald, Congressional Research Service Report for Congress. Potential Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress. Washington D.C.: Congressional Research Service, 8 November 2004.
- Route, R.A., RADM, USN and Hanlon, Edward, Jr, LtGen, USMC, "Enhanced Networked Seabasing. Available from [http://www.nwdc.navy.mil/Concepts/Sea\\_Basing/ENSeabasing.aspx.html](http://www.nwdc.navy.mil/Concepts/Sea_Basing/ENSeabasing.aspx.html). Internet. Accessed 28 January 2005.
- Rumsfeld, Donald H., *Quadrennial Defense Reivew Report*. Washington D.C.: Office of the Secretary of Defense, 30 September 2001.
- Rumsfeld, Donald H., *Transformation Planning Guidance*. Washington D.C.: Office of the Secretary of Defense, April 2003.
- Sanford, John, LCDR, USN, "Even the Army Can Come From the Sea," *Proceedings*, December 2003: 56-58.
- Scales, Robert, MG, USA (Ret), "Army View of Seabasing", lecture, Arlington, VA: Surface Navy Association Annual Symposium, 12 January 2005.
- Sirios, R. Dennis, RADM, USCG, "Components of Sea Basing: What's available in the Interim?" panel discussion, Arlington, VA: Surface Navy Association Annual Symposium, 12 January 2005.
- Stavridis, James, RADM, USN and Pandolfe, Frank, CAPT, USN, "From Sword to Shield: Naval Forces in the Global War on Terror," *Proceedings*, August 2004: 48-51.
- Sullivan, William D., RADM, USN, "Sea Shield and Sea Basing – View from the Joint Staff", lecture, Arlington, VA: Surface Navy Association Annual Symposium, 13 January 2005.
- Tiron, Roxana, "Sea Basing Hurdles: Deployment of Sea Bases Faces Technical, Budgetary Challenges," *National Defense*, January 2005: 30-35.
- Truver, Scott C., "To Dissuade, Deter, and Defeat: US Naval Power in the 21<sup>st</sup> Century," *Sea Power*, February 2003: 31-34.

- Turner, Stansfield, ADM, USN(ret), "Is the U.S. Navy being Marginalized?" *Naval War College Review*, 57 (Summer 2003): 97-103.
- Uhlig, Frank, Jr., "Fighting at and From the Sea: A Second Opinion," *Naval War College Review*, 56 (Spring 2003):39-52.
- Uhlig, Frank, Jr. *How Navies Fight: The U.S. Navy and Its Allies*. Annapolis, MD: US Naval Institute Press, 1994.
- U.S Department of the Navy. *Naval Transformation Roadmap: Assured access and power projection ... from the sea*. Washington, D.C.: U.S. Department of the Navy, 2003.
- U.S Department of the Navy. *Naval Warfare*. Naval Doctrine Publication 1. Washington, D.C.: U.S. Department of the Navy, 28 March 1994.
- U.S Department of the Navy. *Naval Logistics*. Naval Doctrine Publication 4. Washington, D.C.: U.S. Department of the Navy, 10 January 1995.
- Waickwicz, John, RADM, USN, "Meeting Future Challenges to Sea Basing and Sea Shield" panel discussion, Arlington, VA: Surface Navy Association Annual Symposium, 13 January 2005.

